

### **REMARKS/ARGUMENTS**

Reconsideration and allowance of the present application based on the following remarks are respectfully requested.

Claims 23-41 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Claims 23-41 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Applicants submit that the claims, as amended, are in full compliance with 35 U.S.C. §112, first and second paragraphs.

Regarding the assertion that term "3 to 10" is not adequately described and is indefinite, Applicants submit that it would be readily recognized by the skilled person that the compounds of the pending claims may be prepared as mixtures of compounds having, for example, varying degrees of ethoxylation (both in total and at any particular sorbitol hydroxyl group), numbers of acyl esters residues, and/or probably core residues. Accordingly, that the average number for the respective indices may be non-integral is a simple arithmetical consequence of this. Moreover, there are multiple references to the "compounds of the invention" being mixtures and (chemically equivalent) that the values of the respective indices, being averages, may be non-integral. Accordingly, in addition to the citations noted on page 6 of the Response dated April 15, 2010, Applicants note at least the following support found in the original specification, *e.g.*, on page 5, lines 1-3 (the core residue R<sup>1</sup> being mixtures, with the index m being possibly non-integral); page 5, lines 10-12 (for the overall number of acyl groups); page 5, lines 14-25 (for the number of acyl groups including two or more double bonds); and page 7, lines 2-3 (for the number of EO residues per chain and the total number of EO groups in each molecule).

Claims 23-34 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Publication 2003/0153787 ("Carpenter") in view of U.S. Patent Publication 2003/0187103 ("Bloom"). Claims 35-41 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Carpenter in view of Bloom, in further view of U.S. Patent 6,780,910 ("Bouvvy"). For at least the following reasons, the claims are believed to be patentable over the cited references.

Applicants note the Examiner has acknowledged, on page 5 of the present Official Action, that Carpenter does not teach a hydrocarbyl group *comprising at*

*least two* ethylenic double bonds. Accordingly, to cure this deficiency, the asserted obviousness rejection must rely on the “polyunsaturated fatty acid or derivative thereof” term in Bloom.

Yet, in contrast to the pending claims, Bloom does not teach or suggest compounds having on average *at least 1.2 groups/molecule* that are or comprise a hydrocarbyl group *comprising at least two ethylenic double bonds*. Rather, Bloom discusses the term “polyunsaturated fatty acid or derivative thereof” in the context of a polyunsaturated fatty acid mono-ester of glycols (see Bloom at paragraph [0067]). Thus, unlike the molecules of the pending claims, Applicants submit Bloom does not suggest compounds comprising *more than one* doubly unsaturated acyl residue.

In turning to the combination of Carpenter with Bloom, Applicants submit that neither reference suggests that Carpenter’s alkenyl succinic acid groups may be exchanged with Bloom’s polyunsaturated fatty acid mono-ester of glycols. Moreover, Applicants submit that the above-noted acknowledgment by the Examiner must naturally extend to a recognition that Carpenter also fails to teach or suggest an alkenyl succinic acid group comprising *more than one* ethylenic double bonds, such as at least two ethylenic double bonds.

Moreover, Applicants submit that the assertion of exchanging the alkenyl succinic acid group in Carpenter’s thickener with Bloom’s polyunsaturated fatty acid mono-ester of glycols over-simplifies the technology of the pending claims and would change the “principle of operation”<sup>1</sup> of Carpenter. A basic principle upon which Carpenter teaches a thickener composition is that it requires a succinic acid group – either an alkyl succinic acid group or an alkenyl succinic acid group [comprising a single double bond]; not a mono-ester comprising *more than one* ethylenic double bonds, such as at least two ethylenic double bonds, as has been asserted by the Examiner. Therefore, Applicants submit that the Examiner has *redefined* a required element of Carpenter (an alkenyl succinic acid group [comprising a single double bond]) and then combined a secondary reference, Bloom (where a polyunsaturated fatty acid mono-ester of glycols does NOT comprise a succinic acid group, *i.e.*, does

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<sup>1</sup> VI. THE PROPOSED MODIFICATION CANNOT CHANGE THE PRINCIPLE OF OPERATION OF A REFERENCE. If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959) [See MPEP 2143.01(V)]

not have the essential element of Carpenter's thickener) to build a *prima facie* case of obviousness. Thus, the combination asserted by the Examiner fails to present a *prima facie* case of obviousness as the change in the principle of operation results in an unpredictable combination with no reasonable expectation of success.

Accordingly, Applicants submit that there is no suggestion to combine Carpenter and Bloom. Moreover, even if there were a suggestion to combine these references, Applicants submit that the Examiner has failed to present a *prima facie* case of obviousness. Specifically, the combination of Carpenter and Bloom fails to suggest a mixture of compounds of formula (I) having, *inter alia*, on average at least 1.2 of the R<sup>2</sup> groups/molecule that are or comprise a C<sub>4</sub> to C<sub>21</sub> hydrocarbyl group comprising at least two ethylenic double bonds.

Finally, as Bouvy fails to cure the above-noted deficiencies of either Carpenter or Bloom, alone or in combination, Applicants submit that the pending claims are patentable over the cited references.

Therefore, all objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

Should any issues remain unresolved, the Examiner is encouraged to contact the undersigned attorney for Applicants at the telephone number indicated below in order to expeditiously resolve any remaining issues.

Respectfully submitted,

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